Oecologia

Derived from *"Zeitschrift für Morphologie und Ökologie der Tiere"*, *Oecologia* was founded in 1968, volumes (1968–1982), and edited by H. Remmert. As of volume 53 (1982) the journal has been edited by both H. Remmert and E.-D. Schulze. As of volume 81 (1989) the journal has been edited by J.R. Ehleringer, Salt Lake City; C.H. Peterson, Morehead City; H. Remmert, Marburg; E.-D. Schulze, Bayreuth. As of volume 83 (1990) the journal has been edited by J.R. Ehleringer, Salt Lake City; C.H. Peterson, Morehead City; M. Schaefer, Göttingen; E.-D. Schulze, Bayreuth. As of volume 110 (1997) the journal has been edited by J.R. Ehleringer, Salt Lake City; M. Schaefer, Göttingen; E.-D. Schulze, Bayreuth; D.R. Strong, Bodega Bay. As of volume 115 (1998) the journal has been edited by J.R. Ehleringer, Salt Lake City; M. Schaefer, Göttingen; C. Körner, Basel; D.R. Strong, Bodega Bay. As of volume 126 (2001) the journal has been edited by J.R. Ehleringer, Salt Lake City; C. Körner, Basel; C.W. Osenberg, Gainesville; M. Schaefer, Göttingen. As of volume 129 (2001) the journal has been edited by R. Brandl, Marburg; J.R. Ehleringer, Salt Lake City; C. Körner, Basel; C.W. Osenberg, Gainesville.

Contents of Volume 141 · 2004

Abrusán G: Filamentous cyanobacteria, temperature and *Daphnia* growth: the role of fluid mechanics 395
Adams M → Arndt SK
Adler GH → Mangan SA
Allison SD, Vitousek PM: Rapid nutrient cycling in leaf litter from invasive plants in Hawai'i 612
Almany GR: Differential effects of habitat complexity, predators and competitors on abundance of juvenile and adult coral reef fishes 105
Alpizar-Jara R, Nichols JD, Hines JE, Sauer JR, Pollock KH, Rosenberry CS: The relationship between species detection probability and local extinction probability 652
Andersson T → Klemola T
Anthony KRN, Connolly SR: Environmental limits to growth: physiological niche boundaries of corals along turbidity–light gradients 373
Antos JA → Parish R
Arampatsis C → Arndt SK
Aravena JC → Pérez CA
Armesto JJ → Pérez CA
Arndt SK, Kahmen A, Arampatsis C, Popp M, Adams M: Nitrogen fixation and metabolism by groundwater-dependent perennial plants in a hyperarid desert 385
Austin AT, Yahdjian L, Stark JM, Belnap J, Porporato A, Norton U, Ravetta DA, Schaeffer SM: Water pulses and biogeochemical cycles in arid and semiarid ecosystems 221

Baer P → Kueppers LM
Bakker JP → Kuijper DPJ
Baldwin S → McIntyre PB
Baraloto C, Goldberg DE: Microhabitat associations and seedling bank dynamics in a neotropical forest 701
Barmuta LA → Warfe DM
Barnes DKA → Brown KM
Beekey MA, McCabe DJ, Marsden JE: Zebra mussels affect benthic predator foraging success and habitat choice on soft sediments 164
Belk MC → Mills MD
Belnap J, Phillips SL, Miller ME: Response of desert biological soil crusts to alterations in precipitation frequency 306
Belnap J → Austin AT
Belnap J → Loik ME
Bennett JN, Prescott CE: Organic and inorganic nitrogen nutrition of western red cedar, western hemlock and salal in mineral N-limited cedar–hemlock forests 468
Berwaerts K, Van Dyck H: Take-off performance under optimal and suboptimal thermal conditions in the butterfly *Pararge aegeria* 536
Bitz JH → Grafe TU
Bjørnlund L → Vestergård M
Bleher B → Voigt FA
Blondel J → Lambrechts MM
Böhning-Gaese K → Voigt FA
Bowen GJ → Hobson KA
Breshears DD → Loik ME
Brooks JR → Domec J-C
Brown KM, Fraser KPP, Barnes DKA, Peck LS: Links between the structure of an Antarctic shallow-water community and ice-scour frequency 121

Cable JM, Huxman TE: Precipitation pulse size effects on Sonoran Desert soil microbial crusts 317
Cable JM → Huxman TE
Cáceres CE, Tessier AJ: Incidence of diapause varies among populations of *Daphnia pulicaria* 425
Caldwell MM → Ryel RJ
Carleton SA, Wolf BO, Rio CM del: Keeling plots for hummingbirds: a method to estimate carbon isotope ratios of respired CO_2 in small vertebrates 1
Carmona MR → Pérez CA
Caro S → Lambrechts MM
Carroll CR → Lindquist ES
Cartan-Son M → Lambrechts MM
Catterall C → Moran C
Chambers JQ, Higuchi N, Teixeira LM, Santos J dos, Laurance SG, Trumbore SE: Response of tree biomass and wood litter to disturbance in a Central Amazon forest 596
Charmantier A → Lambrechts MM
Chesson P, Gebauer RLE, Schwinning S, Huntly N, Wiegand K, Ernest MSK, Sher A, Novoplansky A, Weltzin JF: Resource pulses, species interactions, and diversity maintenance in arid and semi-arid environments 236
Childers DL → Daoust RJ
Christensen S → Vestergård M
Connolly SR → Anthony KRN
Coulombe R → Domec J-C
Crozier LG: Field transplants reveal summer constraints on a butterfly range expansion 148

Daoust RJ, Childers DL: Ecological effects of low-level phosphorus additions on two plant communities in a neotropical freshwater wetland ecosystem 672
Dawson TE → Kennedy PG
Dias PC → Lambrechts MM
Domec J-C, Warren JM, Meinzer FC, Brooks JR, Coulombe R: Native root xylem embolism and stomatal closure in stands of Douglas-fir and ponderosa pine: mitigation by hydraulic redistribution 7
Donovan LA → Snyder KA

Edenfield R → Westneat DF
Ehleringer JR → Schwinning S
Ehlers BK, Thompson J: Do co-occurring plant species adapt to one another? The response of *Bromus erectus* to the presence of different *Thymus vulgaris* chemotypes 511
Eilts JA → Huxman TE
English NB → Huxman TE
Eom A-H → Mangan SA
Ernest MSK → Chesson P
Evans EW → Yasuda H

Fahrig L → Grez A
Fernández RJ → Reynolds JF
Ferrand Y → Hobson KA
Fietz J → Voigt FA
Flecker AS → McIntyre PB
Fraser KPP → Brown KM
Fritz H → Garine-Wichatitsky M de

Galan M-J → Lambrechts MM
Galloway LF → Lau JA
Ganzhorn JU → Voigt FA
Garine-Wichatitsky M de, Fritz H, Gordon IJ, Illius AW: Bush selection along foraging pathways by sympatric impala and greater kudu 66
Gebauer RLE → Chesson P
Goldberg DE → Baraloto C
Goldberg DE → Sher AA
Gordon IJ → Garine-Wichatitsky M de
Grafe TU, Kaminsky SK, Bitz JH, Lüssow H, Linsenmair KE: Demographic dynamics of the afro-tropical pig-nosed frog, *Hemisus marmoratus*: effects of climate and predation on survival and recruitment 40
Green R → Moran C
Grez A, Zaviezo T, Tischendorf L, Fahrig L: A transient, positive effect of habitat fragmentation on insect population densities 444
Griffiths RA → Moore RD
Gross N → Lambrechts MM

Hakkarainen H, Mykrä S, Kurki S, Tornberg R, Jungell S: Competitive interactions among raptors in boreal forests 420
Harte J → Kueppers LM
Hausmann NJ → Kennedy PG
Hegyi G → Török J
Herre EA → Mangan SA
Hertling UM → Knevel IC
Higuchi N → Chambers JQ
Hines JE → Alpizar-Jara R
Hobson KA, Bowen GJ, Wassenaar LI, Ferrand Y, Lormee H: Using stable hydrogen and oxygen isotope measurements of feathers to infer geographical origins of migrating European birds 477
Hromada M → Kaňuščák P
Huckins CJF → Osenberg CW
Huntly N → Chesson P
Huxman TE, Cable JM, Ignace DD, Eilts JA, English NB, Weltzin J, Williams DG: Response of net ecosystem gas exchange to a simulated precipitation pulse in a semi-arid grassland: the role of native versus non-native grasses and soil texture 295
Huxman TE, Snyder KA, Tissue D, Leffler AJ, Ogle K, Pockman WT, Sandquist DR, Potts DL, Schwinning S: Precipitation pulses and carbon fluxes in semiarid and arid ecosystems 254
Huxman TE → Cable JM

Ignace DD → Huxman TE
Illius AW → Garine-Wichatitsky M de
Ivans CY → Ryel RJ

Jackson RB → McCulley RL
James JJ → Snyder KA
Jay D → Moore RD
Jeltsch F → Wiegand K
Jobbágy EG → McCulley RL
Jungell S → Hakkarainen H

Kaňuščák P, Hromada M, Tryjanowski P, Sparks T: Does climate at different scales influence the phenology and phenotype of the River Warbler *Locustella fluviatilis*? 158
Kahmen A → Arndt SK
Kajita Y → Yasuda H
Kaltenberg A → Osenberg CW
Kaminsky SK → Grafe TU
Kemp PR → Reynolds JF
Kennedy PG, Hausmann NJ, Wenk EH, Dawson TE: The importance of seed reserves for seedling performance: an integrated approach using morphological, physiological, and stable isotope techniques 547
Kinnard TB → Westneat DF
Klemola T, Ruohomäki K, Andersson T, Neuvonen S: Reduction in size and fecundity of the autumnal moth, *Epirrita autumnata*, in the increase phase of a population cycle 47
Knevel IC, Lans T, Menting FBJ, Hertling UM, Putten WH van der: Release from native root herbivores and biotic resistance by soil pathogens in a new habitat both affect the alien *Ammophila arenaria* in South Africa 502
Könczey R → Török J
Körner C → Steinmann K
Kueppers LM, Southon J, Baer P, Harte J: Dead wood biomass and turnover time, measured by radiocarbon, along a subalpine elevation gradient 641
Kuijper DPJ, Nijhoff DJ, Bakker JP: Herbivory and competition slow down invasion of a tall grass along a productivity gradient 452
Kurki S → Hakkarainen H

Lambrechts MM, Caro S, Charmantier A, Gross N, Galan M-J, Perret P, Cartan-Son M, Dias PC, Blondel J, Thomas DW: Habitat quality as a predictor of spatial variation in blue tit reproductive performance: a multi-plot analysis in a heterogeneous landscape 555
Lans T → Knevel IC
Larson DW → Lundholm JT
Lau JA, Galloway LF: Effects of low-efficiency pollinators on plant fitness and floral trait evolution in *Campanula americana* (Campanulaceae) 577
Lauenroth WK → Loik ME
Laurance SG → Chambers JQ
Leffler AJ → Huxman TE
Leffler AJ → Ryel RJ
LeJeune KD → Suding KN
Lindquist ES, Carroll CR: Differential seed and seedling predation by crabs: impacts on tropical coastal forest composition 661
Linsenmair KE → Grafe TU
Loik ME, Breshears DD, Lauenroth WK, Belnap J: A multi-scale perspective of water pulses in dryland ecosystems: climatology and ecohydrology of the western USA 269
Loik ME → Schwinning S
Lormee H → Hobson KA
Lundholm JT, Larson DW: Experimental separation of resource quantity from temporal variability: seedling responses to water pulses 346
Lüssow H → Grafe TU

Mangan SA, Eom A-H, Adler GH, Yavitt JB, Herre EA: Diversity of arbuscular mycorrhizal fungi across a fragmented forest in Panama: insular spore communities differ from mainland communities 687
Marsden JE → Beekey MA
Martinez A → Osenberg CW
Mayhew PJ → Pexton JJ
McCabe DJ → Beekey MA
McCulley RL, Jobbágy EG, Pockman WT, Jackson RB: Nutrient uptake as a contributing explanation for deep rooting in arid and semi-arid ecosystems 620
McIntyre PB, Baldwin S, Flecker AS: Effects of behavioral and morphological plasticity on risk of predation in a Neotropical tadpole 130
Meinzer FC → Domec J-C
Menting FBJ → Knevel IC
Miller ME → Belnap J
Mills MD, Rader RB, Belk MC: Complex interactions between native and invasive fish: the simultaneous effects of multiple negative interactions 713
Moore RD, Griffiths RA, O'Brien CM, Murphy A, Jay D: Induced defences in an endangered amphibian in response to an introduced snake predator 139
Moran C, Catterall C, Green R, Olsen M: Functional variation among frugivorous birds: implications for rainforest seed dispersal in a fragmented subtropical landscape 584
Murphy A → Moore RD
Mykrä S → Hakkarainen H

Neofotis PG → Peterson AG
Neuvonen S → Klemola T
Nichols JD → Alpizar-Jara R
Nijhoff DJ → Kuijper DPJ
Norton U → Austin AT
Novoplansky A → Chesson P
Novoplansky A → Sher AA
Nufio CR, Papaj DR: Superparasitism of larval hosts by the walnut fly, *Rhagoletis juglandis*, and its implications for female and offspring performance 460

Ogle K, Reynolds JF: Plant responses to precipitation in desert ecosystems: integrating functional types, pulses, thresholds, and delays 282
Ogle K → Huxman TE
Ogle K → Reynolds JF
Olsen M → Moran C
O'Brien CM → Moore RD
Osenberg CW, Huckins CJF, Kaltenberg A, Martinez A: Resolving within- and between-population variation in feeding ecology with a biomechanical model 57

Papaj DR → Nufio CR
Parish R, Antos JA: Structure and dynamics of an ancient montane forest in coastal British Columbia 562
Pearson KM, Theimer TC: Seed-caching responses to substrate and rock cover by two *Peromyscus* species: implications for pinyon pine establishment 76
Peck LS → Brown KM
Peek MS → Ryel RJ
Pérez CA, Carmona MR, Aravena JC, Armesto JJ: Successional changes in soil nitrogen availability, non-symbiotic nitrogen fixation and carbon/nitrogen ratios in southern Chilean forest ecosystems 546
Perret P → Lambrechts MM
Peterson AG, Neofotis PG: A hierarchical analysis of the interactive effects of elevated CO_2 and water availability on the nitrogen and transpiration productivities of velvet mesquite seedlings 629
Pexton JJ, Mayhew PJ: Competitive interactions between parasitoid larvae and the evolution of gregarious development 179
Phillips SL → Belnap J
Pockman WT → Huxman TE
Pockman WT → McCulley RL
Pollock KH → Alpizar-Jara R
Popp M → Arndt SK
Porporato A → Austin AT
Poston JP → Westneat DF
Potts DL → Huxman TE
Prescott CE → Bennett JN
Putten WH van der → Knevel IC

Rader RB → Mills MD
Rajaniemi TK, Reynolds HL: Root foraging for patchy resources in eight herbaceous plant species 519
Ravetta DA → Austin AT
Reichwaldt ES, Wolf ID, Stibor H: The effect of different zooplankton grazing patterns resulting from diel vertical migration on phytoplankton growth and composition: a laboratory experiment 411
Reynolds HL → Rajaniemi TK
Reynolds JF, Kemp PR, Ogle K, Fernández RJ: Modifying the 'pulse–reserve' paradigm for deserts of North America: precipitation pulses, soil water, and plant responses 194
Reynolds JF → Ogle K
Richards JH → Snyder KA
Rio CM del → Carleton SA
Rosenberry CS → Alpizar-Jara R
Ruohomäki K → Klemola T
Ryel RJ, Leffler AJ, Peek MS, Ivans CY, Caldwell MM: Water conservation in *Artemisia tridentata* through redistribution of precipitation 335

Sala OE → Schwinning S
Sandquist DR → Huxman TE
Santos J dos → Chambers JQ
Sauer JR → Alpizar-Jara R
Saurer M → Steinmann K
Schaeffer SM → Austin AT
Schwab D → Voigt FA
Schwinning S, Sala OE: Hierarchy of responses to resource pulses in arid and semi-arid ecosystems 211
Schwinning S, Sala OE, Loik ME, Ehleringer JR: Thresholds, memory, and seasonality: understanding pulse dynamics in arid/semi-arid ecosystems 191
Schwinning S → Chesson P
Schwinning S → Huxman TE
Seastedt TR → Suding KN
Sher A → Chesson P
Sher AA, Goldberg DE, Novoplansky A: The effect of mean and variance in resource supply on survival of annuals from Mediterranean and desert environments 353
Siegwolf RTW → Steinmann K
Slik JWF: El Niño droughts and their effects on tree species composition and diversity in tropical rain forests 114
Snyder KA, Donovan LA, James JJ, Tiller RL, Richards JH: Extensive summer water pulses do not necessarily lead to canopy growth of Great Basin and northern Mojave Desert shrubs 325
Snyder KA → Huxman TE
Southon J → Kueppers LM
Sparks T → Kaňuščák P
Stark JM → Austin AT
Steinmann K, Siegwolf RTW, Saurer M, Körner C: Carbon fluxes to the soil in a mature temperate forest assessed by ^{13}C isotope tracing 489
Stibor H → Reichwaldt ES
Storz BL: Reassessment of the environmental mechanisms controlling developmental polyphenism in spadefoot toad tadpoles 402
Suding KN, LeJeune KD, Seastedt TR: Competitive impacts and responses of an invasive weed: dependencies on nitrogen and phosphorus availability 526
Sutherland S: What makes a weed a weed: life history traits of native and exotic plants in the USA 24

Takizawa T → Yasuda H
Teixeira LM → Chambers JQ
Tessier AJ → Cáceres CE
Theimer TC → Pearson KM
Thomas DW → Lambrechts MM
Thompson J → Ehlers BK
Tiller RL → Snyder KA
Tischendorf L → Grez A
Tissue D → Huxman TE

Tornberg R → Hakkarainen H
Török J, Hegyi G, Tóth L, Könczey R: Unpredictable food supply modifies costs of reproduction and hampers individual optimization 432
Tóth L → Török J
Trumbore SE → Chambers JQ
Tryjanowski P → Kaňuščák P

Urakawa K → Yasuda H

Van Dyck H → Berwaerts K
Vestergård M, Bjørnlund L, Christensen S: Aphid effects on rhizosphere microorganisms and microfauna depend more on barley growth phase than on soil fertilization 84
Vitousek PM → Allison SD
Voigt FA, Bleher B, Fietz J, Ganzhorn JU, Schwab D, Böhning-Gaese K: A comparison of morphological and chemical fruit traits between two sites with different frugivore assemblages 94

Ward D → Wiegand K
Warfe DM, Barmuta LA: Habitat structural complexity mediates the foraging success of multiple predator species 171
Warren JM → Domec J-C
Wassenaar LI → Hobson KA
Weiskittle J → Westneat DF
Weltzin J → Huxman TE
Weltzin JF → Chesson P
Wenk EH → Kennedy PG
Westneat DF, Weiskittle J, Edenfield R, Kinnard TB, Poston JP: Correlates of cell-mediated immunity in nestling house sparrows 17
Wiegand K, Jeltsch F, Ward D: Minimum recruitment frequency in plants with episodic recruitment 363
Wiegand K → Chesson P
Williams DG → Huxman TE
Wolf BO → Carleton SA
Wolf ID → Reichwaldt ES

Yahdjian L → Austin AT
Yasuda H, Evans EW, Kajita Y, Urakawa K, Takizawa T: Asymmetric larval interactions between introduced and indigenous ladybirds in North America 722
Yavitt JB → Mangan SA

Zaviezo T → Grez A

Indexed in/abstracted by
BIOSIS, Zoological Record
Current Contents